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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/998,838	11/15/2001	Joseph V. Bonadies	DP-304676	7174

7590 04/20/2004

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EXAMINER

DAVIS, OCTAVIA L

ART UNIT	PAPER NUMBER
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2855

DATE MAILED: 04/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/998,838	BONADIES ET AL.	
	Examiner	Art Unit	
	Octavia Davis	2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/5/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) 19, 38, 40 and 42 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-18, 26 and 32-37 is/are allowed.
- 6) ☒ Claim(s) 1-12, 20-25, 27-31, 39 and 41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 39 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. This claim is an omnibus type claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in the Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 4 - 12, 20 – 25, 27 – 31, 39 and 41 are rejected under 35 U.S.C.

102(b) as being anticipated by Otsuka et al.

Regarding claims 1, 12, 20, 31, 39 and 41, Otsuka et al disclose an air/fuel control system comprising 1 an engine, an oxygen sensor 28 disposed within the exhaust gas passage of said engine and an engine control module 20 operatively connected to said engine including a processor for obtaining a first input signal indicating a first oxygen sensor voltage, obtaining a second input signal indicating a second oxygen sensor voltage

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at a period subsequent to said first input signal, determining a first voltage trend based on said first input signal and said second input signal, and determining whether said first voltage trend is decreasing at a rate greater than a first voltage threshold rate (See Col. 5, lines 7 – 28 and 46 – 53, Col. 7, lines 1 – 13 and Col. 8, lines 50 – 68).

Regarding claims 2, 21 and 22, an open loop fueling is adjusted if said first voltage trend is decreasing at a rate greater than said first voltage threshold rate (See Col. 8, lines 50 – 68).

Regarding claims 4, 5, 23 and 24, the adjustment includes adding fuel to combustion chambers of said engine by increasing a base pulse width command to fuel injectors of said engine (See Col. 6, lines 6 – 9).

Regarding claims 6 – 9, 25, 27 and 28, an engine run condition is sensed prior to obtaining said first input signal (See Cols. 4 and 5, lines 56 – 68 and 1 – 10).

Regarding claims 10 and 29, determining whether closed loop fueling is disabled prior to obtaining said second input signal (See Cols. 5 and 6, lines 53 – 57 and lines 54 – 64).

Regarding claims 11 and 30, determining whether engine coolant temperature is within a temperature operating window prior to obtaining said second input signal (See Col. 5, lines 7 – 10).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Otsuka et al in view of Maloney et al.

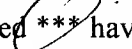
Regarding claim 3, Otsuka et al lack a teaching that open loop fueling is adjusted within five seconds of a cold start of the engine. However, Maloney et al disclose a fuel control for an internal combustion engine wherein open loop fueling is adjusted within a cold starting period (See Col. 3, lines 5 – 31).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Otsuka et al according to the teachings of Maloney et al for the purpose of, permitting the use of air/fuel ratio control during cold starting while minimizing degraded driveability due to high DI fuel (See Maloney et al, Col. 1, lines 41 – 45).

Allowable Subject Matter

7. Claims 13 – 18, 26 and 32 – 37 are allowed.

Response to Arguments

8. Applicant's arguments filed  *** have been fully considered but they are not persuasive. In response to applicant's argument that Otsuka et al do not teach or suggest fuel driveability index, it is the examiner's position that in claims 1, 20 and 41, the recitation "fuel driveability index" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but,

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instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951), thus the reference still stands.


9. Any inquiry concerning this communication should be directed to Examiner Octavia Davis at telephone number (571) 272 - 2176. The examiner can normally be reached on Monday - Thursdays (9:00 - 5:00), Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz, can be reached on (571) 272 - 2180. The fax phone number for the organization where this application where this application or proceeding is assigned is (571) 273 - 2176.



OD/2855

4/7/04



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